

### ABSTRACT

Methods and apparatus, including computer program products, implement techniques for generating library designs for sets of experiments. A library array including a plurality of elements represents an arrangement of experiments. A plurality of sources are defined to represent materials or conditions to be used in the experiments. A mapping sequence defines an ordered sequence of maps representing the application of sources to elements of the library array. A library design is generated, representing the library array, the sources, the maps and the mapping sequence. The library design specifies for each of a plurality of library elements amounts of one or more sources to be applied to the corresponding library element. The amounts are defined at least in part by the order of maps in the mapping sequence.

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